

## REMARKS

In accordance with the foregoing, claims 1, 7, 8, 17, 18 and 24 have been amended. No new matter is being presented, and approval and entry are respectfully requested. Claims 1, 4-8, 10-14, 17, 18, 23, 24 and 27-30 are pending and under consideration. Reconsideration is respectfully requested.

**REJECTIONS UNDER 35 U.S.C. § 103:**

In the interview summary, regarding the Interview conducted on 18 April 2008, applicant's positions are discussed that Kim reference does not display channel numbers, but instead displays the program images. Further, applicant's positions discussed that Kim transmitted in analog form. Examiner agreed that he will consider arguments upon formal filing of amendment.

Claims 1, 7-8, 10-11, 13, 17-18, 23-24 and 27-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim (U.S. Patent No. 5,838,386) in view of Vancelette (U.S. Patent No. 5,894,320).

Kim discusses "FIG. 1 is a block diagram illustrating an example of a conventional OSD circuit. In FIG. 1, OSD oscillator 11 generates an OSD clock. Vertical position detector 12 generates a vertical position arrival signal (VPS) if a counted value becomes zero when down-counting from a vertical position value loaded by a vertical synchronization signal (VSYNC) extracted from a video signal according to a horizontal synchronization signal (HSYNC). Horizontal position detector 13 generates a horizontal position arrival signal (HPS) if a counted value becomes zero when down-counting from a horizontal position value loaded by a horizontal synchronization signal (HSYNC). Timing generator 14 generates a horizontal dot clock obtained by frequency dividing the OSD clock according to character size when VPS and HPS are activated. RAM address generator 15 generates RAM read addresses using the horizontal dot clock."(col. 1, lines 12-29).

As noted above, Kim discusses a vertical synchronization signal (VSYNC) and a horizontal synchronization signal (HSYNC).

A vertical synchronization signal (VSYNC) and a horizontal synchronization signal (HSYNC), are terminologies used with analog television reception and display but not used in digital television reception and display, and further not used with regard to digital channel numbers display.

Further, Kim discusses "FIG. 6 illustrates an example of menu and point displayed on a display device (e.g., CRT, television screen, computer monitor, LCD or other display device) using an OSD circuit according to the present invention. According to the complicated functional capabilities and high-quality of the controlled device, such as a multi-screen television or television

incorporating or coupled to video playback or receiver devices (VCRs, satellites, etc.) or having special audio functions, it is difficult to control the device, which necessitates many remote control keys, and it also is difficult to manipulate the device. An OSD circuit according to the present invention simplifies remote controller 61 such as a mouse for a personal computer or other remote control device, as illustrated in FIG. 6. That is to say, main channel CH0 and several sub-channels CH1, CH2 and CH3 may be displayed on screen 62 as illustrated, in a general OSD circuit, if remote controller 61 is operated to display menu 64. Pointer 65 is moved to select a menu for channel selection, UP (66) or DOWN (67), a button for volume increase (68) or volume decrease (69), or next menu, thereby knowing the selected indicative content by determination of the position value by the central controller. Thus, it is possible to control the device by a simple remote controller."(col. 6, lines 11-30-emphasis added).

Again, Kim merely discusses analog references to a "main channel CH0 and several sub-channels CH1, CH2 and CH3 may be displayed on screen 62 as illustrated, in a general OSD circuit, if remote controller 61 is operated to display menu 64."

Kim discusses such analog main channel CH 0 and several sub-channels CH1, CH2 and CH3.

However, the main channel CH 0 and several sub-channels CH1, CH2 and CH3 of Kim, are not digital channels, and not channel numbers "received through the demanded major channel," but locally generated channel images as shown in FIG. 6(see FIG. 6 of Kim).

The main channel CH 0 in Kim means that a relatively larger image is displayed than the alternate sub-channels CH1, CH2 and CH 3's images as shown in FIG. 6. (see FIG. 6 of Kim). Again, these images are locally generated images representing different analog channels and not minor channel numbers as known in digital display technology.

Again, main channel CH 0 and several sub-channels CH1, CH2 and CH3 of Kim have no relations as recited claim 1, for example, "displaying on a television screen, minor channel numbers received through the demanded major channel".

Thus, in Kim, the meaning the of main channel CH0 and several sub-channels CH1, CH2 and CH3 being displayed on screen 62 as illustrated is that main channel and CH0 and several sub-channels CH1, CH2 and CH3's image is different from the recited major or minor channel numbers in claim 1. **The specification defines the appropriate meaning of major and minor channels.**

Thus, Kim fails to disclose "displaying on the digital television, minor channel numbers received through the demanded major channel." as recited in claim 1. (emphasis added).

Vancelette discusses "the audio and video data packets are time-multiplexed by multiplexer 26 to provide the packetized data stream 380. the data stream 380 is modulated at a specific carrier frequency according to the transmission scheme (E'G', via cable or satellite ) and the programming service provider." (col. 8, lines 33-39).

As noted above, Vacelette discusses how to transmit "an audio and video data packets."

However, Vacelette similarly fails to disclose how to display minor channel numbers received the demand major channel.

Accordingly, it is respectfully submitted that it is respectfully submitted that neither Kim nor Vancelette, either alone or in combination, teach or suggest the invention as recited in claim 1.

Claim 7 is patentable due at least to the similar rationale as claim 1, as well as for the additional recitations therein.

Claim 8 recite "said minor channel numbers are arranged in a prescribed direction on the digital television."

Kim discloses Ch 1, Ch 2, Ch 3, and Ch 0 are displayed in FIG. 6.

However, Kim does not disclose how to arrange minor channel numbers as recited in claim 8.

Accordingly, it is respectfully submitted that it is respectfully submitted that neither Kim nor Vancelette, either alone or in combination, teach or suggest the invention as recited in claim 8.

Claims 10 and 11 are patentable due at least to their depending from claim 7, as well as for the additional recitations therein.

Claim 17 is patentable due at least to the similar rationales as claim 1.

Claim 18 recites "wherein the display displays the minor channel numbers and the major channel number simultaneously and displays in a format of X, X-1, X-2 . . . X-n, wherein X is the major channel number, 1, 2 . . . n are minor channel numbers, and n is the highest minor channel number."

However, Kim merely discloses CH 0, CH 1, CH 2, and CH 3.

As noted above, it is unclear whether CH 0, CH 1, CH 2, and CH 3 are channel numbers.

Further, Kim clearly shows different format from as recited in claim 18.

Accordingly, it is respectfully submitted that it is respectfully submitted that neither Kim nor Vancelette, either alone or in combination, teach or suggest the invention as recited in claim 18.

Regarding claims 23 and 28, the office action sets forth that Official Notice is taken that at the time the invention was made.

By taking Official Notice, the rejection is being based, in part, on the personal knowledge of the Examiner. The personal knowledge of the Examiner, when used as a basis for a rejection,

must be supported by an affidavit as to the specifics of the facts of that knowledge when called for by the applicant. See, MPEP 2144.03, 37 C.F.R. § 1.104(d)(2). In short, the rules of the U.S. Patent and Trademark Office require that the Examiner must either support this assertion with an Affidavit, or withdraw the rejection. Therefore, it is further respectfully requested that the Examiner support the rejection with either an affidavit or a reference, or withdraw the rejection.

Claims 27, and 29-30 are patentable due at least to their depending from claim 1, as well as for the additional recitations therein.

Claims 4-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim and Vancelette further in view of Etherdge (U.S. Patent No. 6,172,674).

Etherdge discusses "in step 624, the system receives a selection from the user, the user can select an of the pop-up symbols in one option, if the user does not select a symbol within a predetermined amount of time, the entire dialog, or just the pop-up symbols, can be removed form the display."(col. 15, lines 10-15).

Etherdge discusses a particular pop-up menu, but fails to discuss "further comprising hiding said minor channel numbers after a prescribed time elapses" as recited in claim 4.

As noted above, Kim does not disclose minor channel numbers as recited in claim 4.

Accordingly, it is respectfully submitted that it is respectfully submitted that neither Kim nor Etherdge, either alone or in combination, teach or suggest the invention as recited in claim 4.

Similarly, Kim does not disclose major channel number as recited in claim 6.

Accordingly, it is respectfully submitted that it is respectfully submitted that neither Kim nor Etherdge, either alone or in combination, teach or suggest the invention as recited in claim 6.

Claims 12 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim and Vancelette in view of Keenan (U.S. Patent No. 5,161,023).

Keenan discusses "similarly, scanning up beyond the first channel stored in the scan list causes the tuning of the last channel in the scan list. This method of operation is known as "wrapping around" from top to bottom or, bottom to top. Inclusion of a scan list feature in a television receiver having multiple RF input terminals is known from the RCA CTC-133 color television receiver, manufactured by Thomson Consumer Electronics, Inc., Indianapolis, Ind. In this receiver, each RF input terminal has a separate scan list associated with it."(col. 1, lines 50-59-emphaiss added).

In contrast, claim 12 recites "if said channel up key is pressed, determining if the minor channel number of said viewing program is a highest number among said minor channel numbers; if the manor channel number of said viewing program is the highest number, displaying a program of a lowest minor channel number as said viewing program, and returning to said displaying minor

channel numbers..."

Thus, Keenan does not disclose how to determine if the minor channel number of said viewing program is a highest number among said minor channel numbers; if the manor channel number of said viewing program is the highest number, display a program of a lowest minor channel number as said viewing program, and returning to said displaying minor channel numbers..." as recited in clam 12.

Accordingly, it is respectfully submitted that it is respectfully submitted that neither Kim , Vancelette, nor Keenan, either alone or in combination, teach or suggest the invention as recited in claim 12.

In addition, claim 14 is patentable due at least to the similar rationales as recite in claim 12, as well as for the additional recitations therein.

### **CONCLUSION**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: June 24, 2008

By: 

Sang Chul Kwon  
Limited Recognition No. L0218

1201 New York Avenue, N.W., 7th Floor  
Washington, D.C. 20005  
Telephone: (202) 434-1500  
Facsimile: (202) 434-1501